"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

Synthesis of Some Derivatives of the Alkdiin Carboxylic Acids on the Basis of Diacetylene SOV/79-29-6-40/72

halides. By this method the condensation of 1,3-chloro-bromo propane with n.-butyl diacetylene and diacetylene was carried out which hitherto had not been described in publications. In the latter case a monosubstituted derivative was formed. The diacetylene hydrocarbons obtained are mobile liquids with a characteristic smell, unstable already at room temperature, sensitive to light and more stable in the form of their ether solutions in the cold and in the dark. The n.-butyl- and 1-chloro propyl diacetylenes were accordingly converted into the octa-5,7-diin-8- and chloro-hepta-4,6-diin-7-carboxylic acid. In the case of longer standing in methanol in the presence of sulphuric acid the methyl esters of these acids were obtained, which were used for the amide synthesis without being purified. The derivatives of the alkdiin carboxylic acid obtained were biologically investigated. Among them the isopropyl amide and the copper salt of the octa-5,7-diin-8-carboxylic acid show a bacteriostatic effect with respect to the acid stable bacteria. Copper salt is efficient even against diphtheria bacilli. There are 7 references, 2 of which are Soviet.

Card 2/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

Synthesis of Some Derivatives of the Alkdiin Carboxylic Acids on the Basis of Diacetylene SOV/79-29-6-40/72

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemo-Pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: June 2, 1958

Card 3/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

GUSENKOV, P.V.; NATRADZE, A.G.; KORZHENEVSKIY, E.S.; RUBTSOV, M.V.; PERSHIN, G.N.; MAGIDSON, O.Yu.; KRAFT, M.Ya.; YAKOVLEVA, Ye.V.; SMIRENSKIY, S.P.

M.D. Riazantsev; obituary. Med.prom. 14 no.2:64 F '60. (MIRA 13:5)

(RIAZANTSEV, MIKHAIL DMITRIEVICH, 1892-1960)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, M.Ya.; TSYGANOVA, A.M.

Obtaining trimethylhydroquinone. Med. prom. 14 no. 10:27-30 O '60.
(MIRA 13:10)

(HYDROQUINONE)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

POPOVA, Ye.G.; KRAFT, M.Ya.; BOGDANOVA, N.S.; PERSHIN, G.N.

Quaternary ammonium salt derivatives of alkylaminoalkylamides of 10-undecenoic acid. Med. prom. SSSR 14 no.12:3-9 D '60.
(MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(UNDECONOIC ACID)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

POPOVA, Ye.G.; KRAFT, M.Ya.

Derivatives of 10-undecynoic acid. Zhur.ob.khim. 30 no.6:1787-1791 Je '60. (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(Undecynoic acid)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

69996

5.3900

AUTHORS: Kraft, M. Ya., Borodina, G. M., Strel'tsova, I. N., Struchkov, Yu. T.

S/020/60/131/05/025/069
B011/B117

TITLE: Structure of Monomeric Arseno Compounds

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 5, pp 1074-1076 (USSR)

TEXT: It was proved by the authors in their paper that among all determinations of the molecular weight of arsenobenzene given in literature, only the methods by F. F. Blicke and F. Smith (Ref 10) are correct. All results obtained with other methods are distorted by resinification reactions. All arseno compounds hitherto described can be divided into two groups: I) colored, amorphous, non-crystallizing and non-distillable compounds. Some of these are insoluble in any solvent, others are soluble in appropriate solvents only, when they form viscous solutions. They were found to be polymers (see scheme). II) Colorless and easily crystallizing, distillable substances. They have the character of monomers. A cyclic structure was demonstrated for arsenomethane (III). The situation is more complicated with arsenobenzene: its molecular weight is rather different according to the individual researchers and techniques used (399.8, 402, 642 and, finally, according to F. F. Blicke and F. Smith 895 and 915). It was obviously because of this multiplicity that the structural formula R—As=As-R ($R = C_6H_5$) was adopted. It is, however, improbable that a compound with such a

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Structure of Monomeric Arseno Compounds

S/020/60/131/05/025/069
B011/B117

structure should be colorless. The authors presume that the difference between above-mentioned results could be explained with reference to the instability of the arsenobenzene. Its resinification (polymerization) products are most readily oxidized in air up to C_6H_5AsO. The latter as well as the resinification products of arsenobenzene are very readily soluble in many solvents, but are difficult to detect whereby unreliable results for the molecular weight of arsenobenzene are obtained. The authors arrived at the conclusion that reliable data on the structure of arsenobenzene can be obtained only when the X-ray structural analysis method is used. The thin, almost colorless (yellowish) crystals of arsenobenzene form thin needles. Axis b is the longer one. The simpler shapes are pinacoids {100} and {001}. From data obtained, the authors came to the conclusion that there are 3 crystallographically non-equivalent As atoms contained in a cell. As is proved by the established projection of the electron density (Fig 1), the arsenobenzene molecule is a cyclic system consisting of As atoms. One phenyl group is bound to each As atom. The cycle is six-membered (IV). Such cyclic molecules occupy the position of centers of symmetry within the crystal. The cycle is not arranged in one plane, but has a chair-shaped configuration and a valence angle As - As - As of 93°. The outer valence angles As - As - C are

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Structure of Monomeric Arseno Compounds

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B011/B117

99 ± 3°. The lengths of the bonds As - As are 2.44 A, and that of the bonds C - As = 1.96 A. Provided that data for arsenobenzene given by Blicke and Smith are correct, then their data on the molecular weights of p-arsenotoluene and p-arsenoanisol are also reliable. Hence, the authors come to the conclusion that there are no arseno compounds with a structure R - As=AS - R at all. They actually are either polymers (I) and (II) or cyclic compounds (III) and (IV). There are 1 figure and 10 references, 3 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S. Ordzhonikidze (All-Union Chemicopharmaceutical Scientific Research Institute imeni S. Ordzhonikidze). Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences, USSR)

PRESENTED: October 12, 1959, by A.N. Nesmeyanov, Academician

SUBMITTED: October 6, 1959

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

PERSHIN, G.N.; BOGDANOVA, N.S.; ZNAYEVA, K.I.; KRAFT, M.Ya.

Some regularities in the suppression of influenza virus multiplication by synthetic compounds. Farm.i toks. 24 no.6:690-695 N-D '61. (MIRA 15:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(INFLUENZA—MICROBIOLOGY)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, M.Ya.; BORODINA, G.M.

Reactions of diphenyltin with iodine. Zhur.ob.khim. 32 no.5:1665-1667 My '62. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(Tin) (Iodine)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KATYSHKINA, V.V.; KRAFT, M.Ya.

New type of cation catalysis. Part 4: Catalytic effect of phosphorus pentachloride in the reaction of phenols with phosphoryl chloride. Zhur.ob.khim. 32 no.9:3096-3098 S '62. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Phosphorus chloride) (Phenols) (Phosphoryl chloride)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, M.Ya.; LYUTINA, F.V.

Action of chlorosulfurous acid on alkyl sulfuric acids. Simple method of preparing diethyl sulfate. Zhur.ob.khim. 32 no.11:3493-3495 N '62. (MIRA 15:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Ethyl sulfate)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

PERSHIN, G.N., prof.; KRAFT, M.Ya., prof.; ROZENTUL, M.A., prof.; POZHARSKAYA, A.M., starshiy nauchnyy sotrudnik; MILOVANOVA, S.N., starshiy nauchnyy sotrudnik; BORODINA, G.M., starshiy nauchnyy sotrudnik; MASLOV, P.Ye., starshiy nauchnyy sotrudnik; IVANOVSKAYA, Ye.A., mladshiy nauchnyy sotrudnik; ARONSON, P.Yu., mladshiy nauchnyy sotrudnik; KANCHUKH, Sh.F.; SHEYER, A.A.; ZALIOPO, M.P., spetsialist po moyushchim sredstvam

Treatment of your hair with selenium sulfide soap. Izobr. i rats. no.12:32-33 '63. (MIRA 17:2)

1. Zaveduyushchiy laboratoriyey khimioterapii infektsionnykh zabolevaniy Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta im. Ordzhonikidze (for Pershin). 2. Zaveduyushchiy laboratoriyey metalloorganicheskikh soyedineniy Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta im. Ordzhonikidze (for Kraft). 3. Zaveduyushchiy otdelom TSentral'nogo kozhno-venerologicheskogo instituta (for Rozentul). 4. Zaveduyushchiy laboratoriyey lekarstvennykh form Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta im. Ordzhonikidze (for Pozharskaya). 5. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. Ordzhonikidze (for Milovanova, Borodina, Ivanovskaya, Aronson). 6. Tsentral'nyy kozhno-venerologicheskiy institut (for Mas[illegible]

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

PROTOPOPOV, I.S.; KRAFT, M.Ya.

Reaction of phenol ethers with phosphorus trichloride.
Part 2: Interaction of dimethyl ether of resorcinol with
phosphorus trichloride. Zhur. ob. khim. 34 no. 5:1440-1449
My '64. (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni Ordzhonikidze.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

K.TYSHKINA, V.V.; GOL'TSOVA, R.G.; KRAFT, M.Ya.

Chemistry of nitranol and its production. Khim. i med. no.16: 11-14 '61. (MIRA 17:8)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

MAKAROV, N.V.; POPOVA, Ye.G.; KRAFT, M.Ya.; BOGDANOVA, N.S.; POLIKHINA, L.M.; PERSHIN, G.N.

Effect on influenza viruses and synthesis of N-acyl derivatives of uracil. Farm. i toks. 27 no.1:63-68 Ja-F '64.

(MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni Ordzhonikidze.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

URETSKAYA, G.Ya.; KRAFT, M.Ya.

Carbonyl derivatives of the fluorene series. Part 2: 1,4-diformyl-fluorenone. Zhur. org. khim. 1 no.6:1074-1078 Je '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni Ordzhonikidze.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, M.Ya.; URETSKAYA, G.Ya.

ynthesis of 2-amino-2,5-dimethylbenzophenone. Zhur. org. khim. 1 no.4:696-699 Ap '65. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni Ordzhonikidze.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, M. Ya., doktor khim. nauk

Perspectives of chemotherapy in virus diseases. Zhur. VKHO 10 no. 6:630-636 '65 (MIRA 19:1)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

ACC NR: AP6034263 (N) SOURCE CODE: UR/0390/66/029/005/0597/0600

AUTHOR: Kraft, M. Ya.; Katyshkina, V. V.; Pershin, G. N.; Bogdanova, N. S.

ORG: All-Union Scientific Research Chemical and Pharmaceutical Institute im. S. Ordzhonikidze, Moscow (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut)

TITLE: Cyclic oxocompounds as potential antiviral agents

SOURCE: Farmakologiya i toksikologiya, v. 29, no. 5, 1966, 597-600

TOPIC TAGS: cyclic oxocompound, antivirus agent, drug effect, pharmacology, virus, virology, nucleic acid, protein

ABSTRACT: The antiviral properties of the compounds in Table 1 were determined. These compounds were tested on influenza RR-8 type A virus *in vitro* and *in ovo* in tissue cultures. All possessed antiviral activity *in vitro* and some inhibited viral growth in chick embryo epithelium. These cyclic oxocompounds are highly reactive and are thought to produce their inhibitory activity by acting on viral protein in such a way that the viruses cannot adhere to the cell membranes of sensitive cells. Related compounds have been effective against keratitis infections when applied locally. Quinone derivatives with comparatively low redox po-

Card 1/3

UDC: 615.753.5-017.78+616.988-085.753.5

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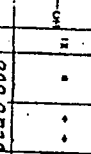
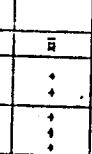
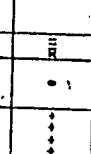
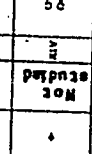
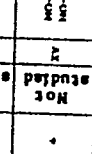
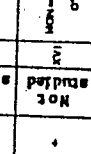
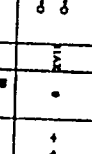
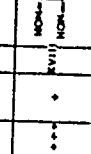
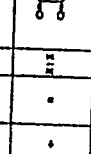
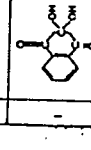
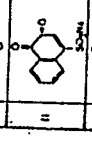
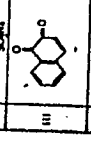
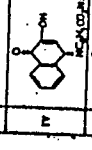
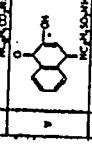
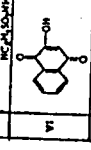
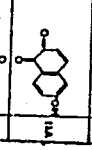
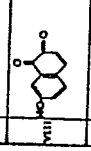
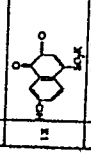
"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

ACC NR: AP6034263

Table 1. Activity of mono- and bicyclic compounds

No.	Compound	Activity in vivo	Activity in vitro
I		0	++
II		not studied	++
III		0	+
IV		+	++
V		+	+
VI		0	+
VII		not studied	0
VIII		not studied	0
IX		not studied	+
X			
XI		0	+
XII		+	++
XIII		0	+++
XIV		not studied	+
XV		not studied	+
XVI		not studied	+
XVII		0	++
XVIII		+	++++
XIX		0	++
		not studied	+

Explanation of symbols

0 - compound inactive in dilutions of 1:1000;
+ - compound active in dilutions of 1:1000;
++ - compound active in dilutions of 1:10000;
+++ - preparation active in dilutions of 1:100000; ++++ - preparation active in dilutions of 1:1000000; +++++ - preparation active in dilutions of 1:10000000

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ACC NR: AP6034263

tentials have been discovered to possess good antiviral properties, thus refuting a theory that antiviral activity and high Eh were connected. The compounds involved in the present study were tested more for their effects on amino groups of nucleic acids and proteins with emphasis on their extracellular interference with the virus and only secondarily for their intracellular effects on reproducing viruses. The object was to find a compound that reacts easily with viral protein but which is comparatively indifferent to the protein of the host cell. The configuration of the molecule of the coumpound is very important and plays a great role in the specificity of the drug. Little antiviral activity was displayed by 4-hydroxy-beta-napthoquinone and its tautomeric form 2-hydroxy-alpha-napthoquinone. The most effective compound was 7-hydroxy-beta-napthoquinone. The activities of the other compounds tested are shown in Table 1. The most effective virus neutralizing compounds (no. I, II, III, VIII, XI, and XV) were used in the treatment of pneumonia in white mice, but were not effective. Orig. art. has: 1 table.

[W.A. 50]

SUB CODE: 06/ SUBM DATE: 20Dec65/ ORIG REF: 002/ OTH REF: 005

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KRAFT, Natan, ing.

Utilization of oxygen in obtaining steel in electric furnaces. Metalurgia Rum 15 no.5:372-374 My '63.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, Natan, ing.

Standard of steel production in the USSR, and prospects of its further development. Metalurgia constr mas 14 no.2:97-100 F '62

1. Combinatul siderurgic, Galati.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, Natan

Utilization of oxygen in the classic roller mills and Martin furnaces. Metalurgia constr mas 14 no.8:757-759 Ag '62.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

Kraft, O. Ye

DZHELEPOV, B.S.; KRAFT, O.Ye.

Measuring half-life periods of radioactive isotopes by means of differential chambers. Vest.Len.un.10 no.8:97-111 Ag '55.
(Radioisotopes) (MLRA 9:1)

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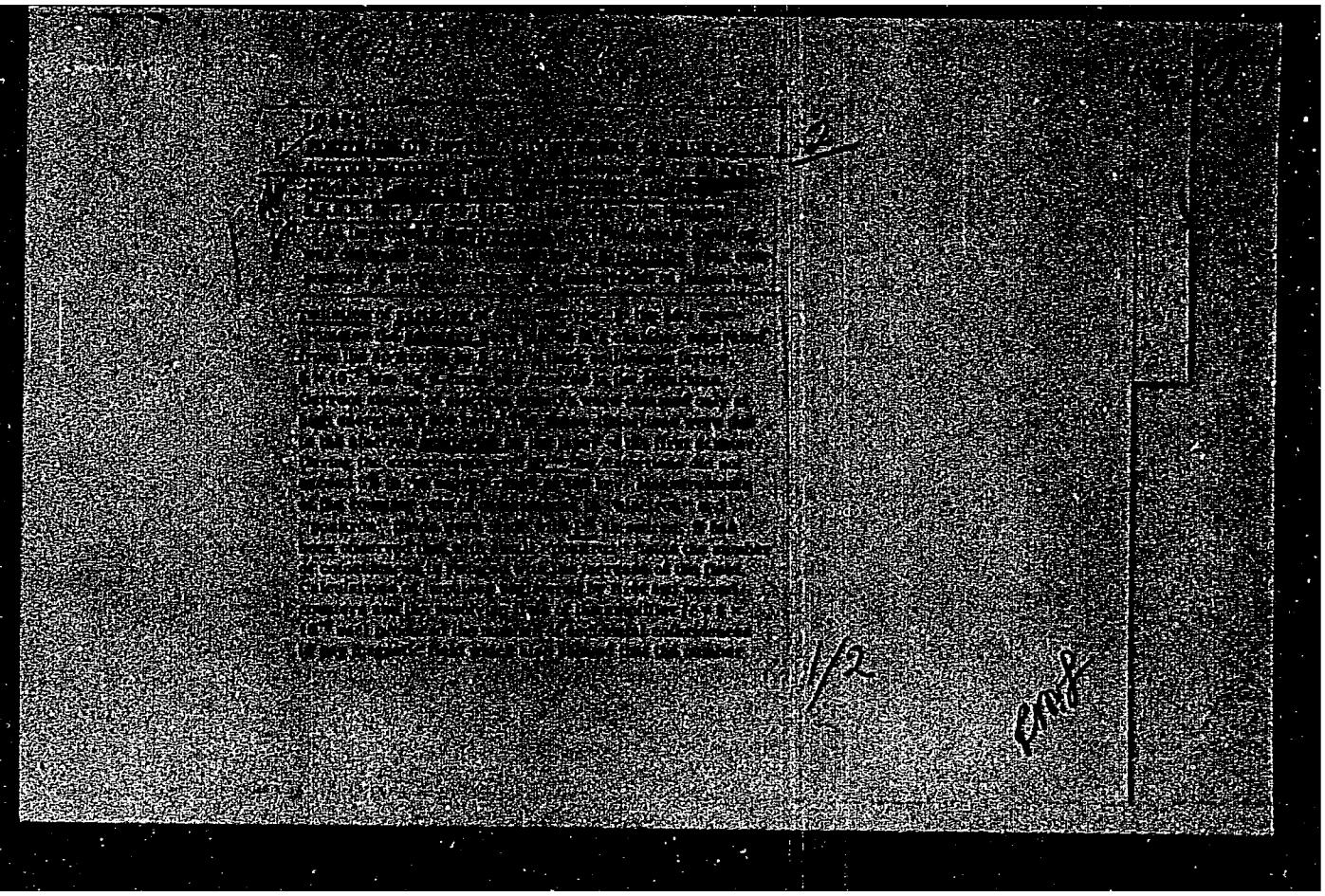

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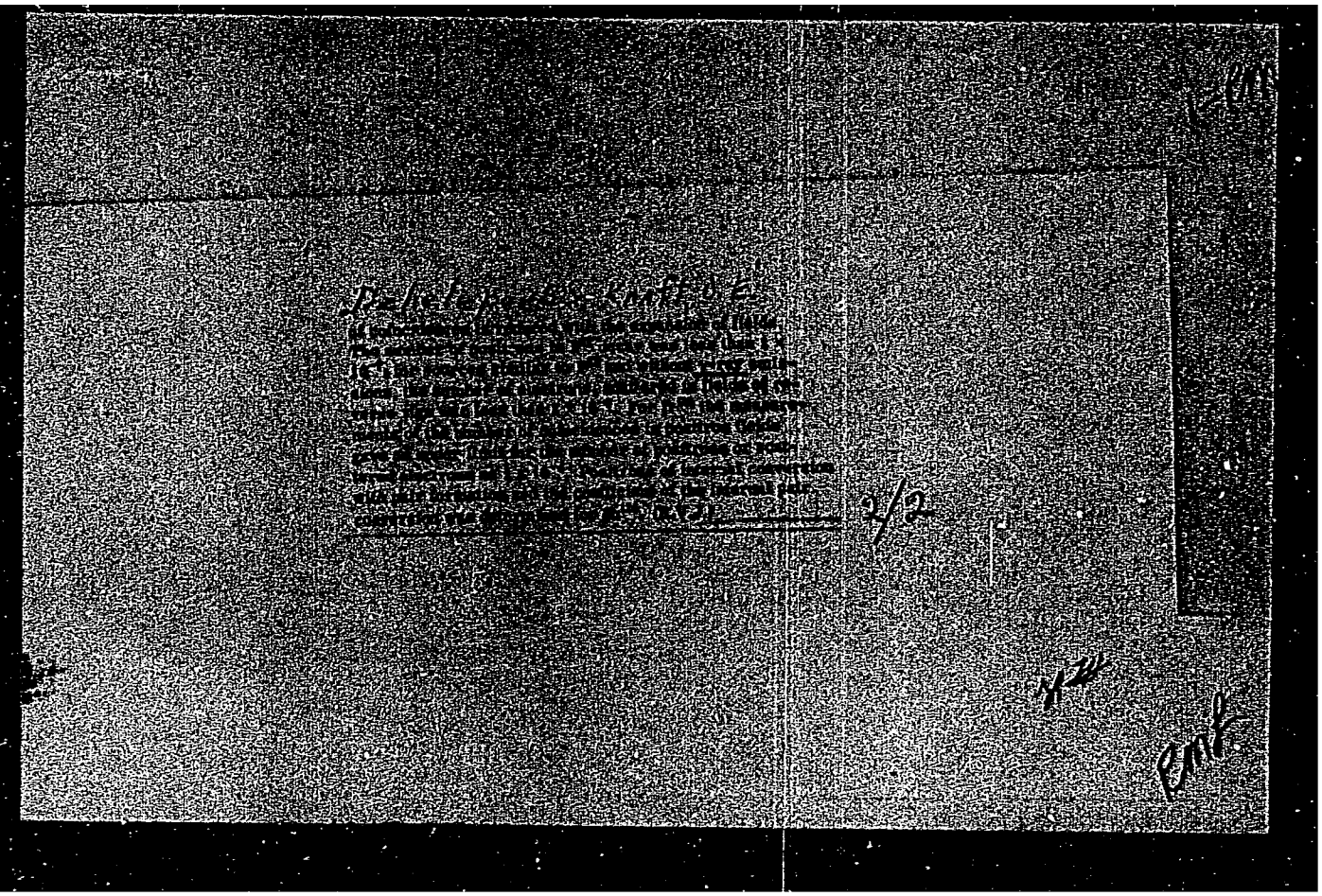

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, O.Ye.

48-7-10/21

AUTHORS: Dzhelepov, B.S., Kraft, O.Ye., Zhinkina, V.B.

TITLE: Positrons in the Radiation of the Radioactive Isotope In^{114} (Pozitrony v izluchenii radioaktivnogo izotopa In^{114})

PERIODICAL: Izvestiya Akad. Nauk SSSR, Ser. Fiz., 1957, Vol. 21, Nr 7, pp. 978 - 984 (USSR)

ABSTRACT: The radioactive isotope In^{114} possesses the possibility of a concurrent β^+-β^--decay. It lies between two stable isobars whose charge differs by two units: Cd^{114}_{48} and Sn^{114}_{50}. This decay is fully described and reference is made to work done in this field by other authors. The radioactive isotope In^{114} possesses two isomers with half-decay periods of 50 days and 72 seconds. The 50 days isomer is converted to its ground state In^{114} by emitting either a γ-quantum with the energy of 192 keV or a conversion electron. The authors further give a survey of data on the In^{114} decay and report on the work done by other authors in this field, where it was for the first time reported on positrons. In order to estimate the intensity and the limiting energy of the positrons the authors used as source an indium foil covered by aluminum as reabsorber. The β-spectrum of

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48-7-10/21

Positrons in the Radiation of the Radioactive Isotope In^{114}

In^{114} was investigated by the authors by means of a magnetic ß -spectrometer. On figure 1 the test spectrum of the positrons of In^{114} is represented. For measuring the background a slide for screening off the ß-particles was inserted. Figure 2 shows the positron spectrum as result. In order to exclude errors the ß-spectrum of In^{114} was measured (under the same conditions as the positron spectrum), and the resulting ß-spectrum is represented on figure 3. Figure 4 records the Fermi diagram for the $ß^-$-spectrum of In^{114}. The dependence of the corrections on the energy is represented on figure 5. In order to estimate how far the corrections were correct, they were plotted on the ordinates of a conversion line (figure 6). Figure 7 shows the Fermi diagram for the positron spectrum of In^{114}. Figure 8 records the scheme of the In^{114} decay. There are 8 figures and 23 references, 5 of which are Slavic.

ASSOCIATION: Leningrad State University imeni A.A.Zhdanov (Leningradskiy gos. universitet imeni A.A. Zhdanova)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, O. Ye.

AUTHORS: Dzhelepov, B. S., Corresponding Member of the AN, USSR, Kraft, O. Ye., Preobrazhenskiy, B. K. 20-4-15/51

TITLE: A Study of the β^+ - Decay of Ho^{160} (Issledovaniye β^+ - raspada v Ho^{160}).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 4, pp. 581-583 (USSR).

ABSTRACT: The authors investigated the holmium-fraction, which was separated from a target irradiated by protons with an energy of 660 MeV. The active substance was deposited in a thin layer on a cellophane with a thickness of 17μ. The authors ascertained from a measurement of the electrone spectrum of holmium the lines corresponding to the transitions 197 ± 5; 287 ± 10; 545 ± 20; 652 ± 20; 730 ± 20; 874 ± 25; 974 + 25 and 1315 + 30 keV. The half life of these lines amounts to 4,5 to 6 hours. The conversion electrons corresponding to the transitions 196; 298; 539; 648; 730; 1876; 967 keV appertain to the isotope Ho^{160}, which has a half life of 5,3 hours. For these reasons, the conversion spectrum of the sample is probably due entirely to Ho^{160}. According to the measurements of the authors this spectrum consists of a composite curve. The Curie diagram of this spectrum is also given here. This diagram shows clearly four components of the β^+ - spectrum. The maximum energies and the relative intensities of these components

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are given. The half life is equal for all components of the spectrum and amounts to 5,6 ± 0,7 hours. From an analysis of the results obtained here two problems arise: 1) To which of the holmium isotopes appertains the positive radiation? 2) By what process are these positrons produced? Are they actually a result of the β^+ - decay or are these positrons corresponding to a pair conversion of the corresponding transitions? From the considerations of the authors the following springs: Because of the fact, that the β^+ spectrum with a half life of 5,6 hours was observed from a source, which was separated from Er after 45 hours, the assumed Ho^X is obtained from Er^X just like Ho^{160}. (H^X denoting an unknown holmium isotope). 2) The fact, that the ratio S_{β^+}/S_{e^-} from both sources is equal, speaks in favour of a convincing similarity not only of the periods of Ho^{160} and Ho^X, but also of the periods of Er^{160} and Er^X. The fraction of Erbium, which had been kept for 110 hours after the separation was used in an additional experiment, which furnished the same results. The greater number of electrons is probably coming from the β^+ - decay of Ho^{160}. The mass difference between Ho^{160} and Dy^{160} amounts to a value of not less than 2920 ± 100 keV. Further details are given.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

A Study of the β^+ - Decay of Ho^{160}. 20-4-15/51

There are 2 figures, 1 table and 7 references, 4 of which are Slavic.

ASSOCIATION: State University imeni M. V. Lomonosov, Leningrad (Leningradskiy gosudarstvennyy universitet imeni M. V. Lomonosova).

SUBMITTED: July 22, 1957.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

FRANT, O.Ye., Cand Phys Math Sci -- (diss) "Study of the β^+ spectra of radioactive isotopes In^{111}, Mo^{160}, Dy^{155} and positrons of pairs of inner conversion in the radioactive isotope Sb^{124} with the aid of a β-spectrometer with 3-multiple focusing of the beam." Len, 1958, 5 pp (Len Order of Lenin State Univ im A.A. Zhdanov) 200 copies (KL, 27-58, 102)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, O. Ye.

AUTHORS: Grigor'yev, Ye. P., Dzhelepov, B. S., 48-22-2-2/17
Zolotavin, A. V., Kraft, O. Ye., Kratsik, B., Peker, L. K.

TITLE: The Decay of Tb^{160} and H^{160} and the Level Schema of Dy^{160} (Raspad Tb^{160} i Ho^{160} i skhema urovney Dy^{160})

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958 Vol. 22, Nr 2, pp. 101-125 (USSR)

ABSTRACT: Radioactive Tb^{160} was here obtained by irradiation with slow neutrons of chemically pure (99,99%) Tb_2O_3. The position and relative intensity of 19 lines was carefully measured in the conversion spectrum. The decomposition of the known line 963 + 966 keV into two components is essentially new. The relative intensities of the γ-transitions were obtained by means of a division of the line areas through the corresponding photoelectric absorption factor. The values were because of the absorption of the γ-rays corrected in the source itself and at the walls of the cylinder, as well as because of the absorption of the photoelectrons in the target and in the slits of the counter. The obtained relative intensities

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of the γ-lines in the spectrum of photoelectrons are in the range of $\pm 20\%$ in agreement with those of references 5 and 6. The measurements of the conversion spectrum show that the soft component is twice as weak as the hard one. The multiplicity of these transitions apparently is equal and between the intensities of the γ-lines the same relation must exist. - Radioactive Ho^{160} was obtained by irradiation of a tantalum target with protons with an energy of up to 660 MeV. The erbium and holmium fractions were chromatographically separated from the target. In the conversion spectrum all conversion lines of Ho^{160} that had been obtained in reference 8 were also confirmed here and many new ones discovered. It is shown that the transitions to the upper levels are permitted ones. The small number of positrons (one positron) per decay is explained by the fact that at the low decay-energy the K-capture is dominating. When the decay to two upper levels is considered permitted K/β^+ can be determined according to the tables by Zweifel (ref. 10). The values 5400 and 400 thus obtained are very high, consequently a considerable part of all conversions of Ho^{160} must take place by way of K-capture. In the

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second short chapter the determination of the multiplicity of transitions is shown and its results are given in the form of a table. - In the third chapter the scheme of the Dy^{160}-levels is treated. A level scheme of Dy^{160} was here compiled with the use of all experimental data, theoretical considerations and the analogy with the neighboring nuclei. This scheme in the best manner corresponds to all data. All arguments confirming this scheme are given here and all facts contradicting this scheme or facts which cannot be explained are enumerated. There are 8 figures, 12 tables, and 19 references, 8 of which are Soviet.

ASSOCIATION: Fizicheskiy institut Leningradskogo gosudarstvennogo universiteta im. A. A. Zhdanova (Institute for Physics in the Leningrad State University imeni A. A. Zhdanov)

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Card 3/3 1. Terbium-Decay 2. Terbium isotopes (Radioactive)

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KRAFT, O. Ya.

AUTHORS: Dzhelepov, B. S., Kraft, O. Ya., Preobrazhenskiy, B. K., Yushkevich, G. F. 48-22-2-14/17

TITLE: Positron Spectra of the Dysprosium Fraction (Spektry pozitronov disprozi yevoy fraktsii)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958 Vol. 22, Nr 2, pp. 208-210 (USSR)

ABSTRACT: The mentioned dysprosium fraction was here obtained by separation from the tantalum target, which was irradiated by protons with an energy of 660 MeV. In this connection it is stated, that no data can be found in publications on the dysprosium isotope with a half life of 20 hours. Dy^{157} was ascribed to the eighth period (reference 2). From reference 3 it can be seen, that another Dy^{155} exists with a half life of 10 hours. In order to determine which isotopes are contained in the here obtained preparation, its conversion spectrum was investigated, which resulted in the determination of 11 peaks of conversion electrons. 6 of these possessed the same half life of 11 ± 2 hours. The energy of the electrons amounted to 180 ± 10, 270 ± 15, 320 ± 20, 400 ± 25, 465 ± 30 and 610 ± 30 keV. It was assumed, that these are K-electrons, possessing

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the transition energies 23o, 32o, 37o, 45o, 515, and 66o keV. Such transitions "apparently" correspond to Dy^{155} or Dy^{157}. The ratio of the number of positrons and of the number of conversion electron transitions with $h\nu$ = 515 keV was established to be 37,5. A half life of 4,7 days and energies of 98, 112, 132 and 162 keV here corresponded to the four groups of conversion electrons. A comparison with the conversion spectrum of the dysprosium fraction as given in reference 3 permits to assume, that in this case it is concerned with the lines k-148, K-162, K-182 and K-21o, which occur in the decay of Tb^{155} (the first three of them), which also pertains to the decay of Dy^{155} and Dy^{157}. Concerning the 2o hours decay period which was found in this investigation in the dysprosium fraction, it is stated here, that its origin remained unclear. Concerning this it is remarked, that in the measurements of the terbium fraction on a ketron (reference 4) positrons from a decay with a half life of 18 hours and a limit energy of ~28oo keV were observed, which is near to the found half life of ~2o hours. For this reason it is assumed, that the respective positron spectrum refers to the isotope Tb with a half life of 18 hours. There are 4 figures and 4 references,
Card 2/3 3 of which are Soviet.

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Positron Spectra of the Dysprosium Fraction 48-22-2-14/17

ASSOCIATION: Fizicheskiy institut Leningradskogo gos. universiteta im. A. A. Zhdanova (Physics Institute, Leningrad University imeni A. A. Zhdanov)

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1. Dysprosium fraction-Positron spectra 2. Proton irradiation-Application

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KRAFT, O. YE.

21(0) PAGE 1 BOOK EXPLOITATION SOV/2020

International Conference on the Peaceful Uses of Atomic Energy, 2d, Geneva, 1958

Nuclear reactions; reference materials (Reports of Soviet Scientists; Nuclear Physics) Moscow, Atomizdat, 1959. 552 p. (Series: Its: Trudy, Vol. 2) 8,000 copies printed.

Eds. (Title page): A.I. Alikhanov, Academician; V.I. Veksler, Academician; and K.A. Ter-Martirosyan, Candidate of Physical and Mathematical Sciences; Ed. of this Volume: K.I. Brendlev and A.P. Zavenlay, Candidates of Physical and Mathematical Sciences; Ed. (Title Page): G.N. Smirnov; Tech. Ed.: V.V. Nikol'.

PURPOSE: This collection of articles is intended for scientific research workers and other persons interested in nuclear physics. The volume contains 43 papers presented by Soviet scientists at the Second Conference on Peaceful Uses of Atomic Energy, held in Geneva in September 1958.

COVERAGE: It is divided into two parts. Part I contains 27 papers dealing with plasma physics and controlled thermonuclear reactions, and Part II contains 26 papers on nuclear physics, including problems of particle acceleration and of cosmic ray physics. The first paper by L.A. Artsimovich presents a review of Soviet work on controlled thermonuclear reactions. The remaining papers in Part I deal with particular problems in this field.

papers in Part II deal in detail with various problems in nuclear physics, such as the studies of heavy atoms and their isotopes, and with the study of cosmic radiation by means of artificial earth satellites and rockets. Abstracts of a paper by B.M. Vanner. The Russian-language edition of the proceedings of the conference is published in 16 volumes. The first 6 volumes contain all the papers presented by Soviet scientists as follows: Volume (1), Reactors (Nuclear Physics); Volume (2), Reactor Materials; Volume (3), Reactor Physics; Volume (4), Nuclear Reactor and Nuclear Power; Volume (5), Isotopes and Nuclear Radiation; Volume (6), Controlled Thermonuclear Reactions; Volume 7, Radiobiology; Volume 8, Proton Synchrotrons; Volume (9) Radiation Medicine; Volume (10) Problems connected with the Study of Cosmic Rays and Elementary Particles. The other 10 volumes contain selected papers presented at the Conference by non-Soviet scientists. In the present volume are contained papers on the Physics and Nuclear Reactors. A comprehensive review of the Conference by an American scientist, Dr. Alvin M. Weinberg, Director of the Oak Ridge National Laboratory, is contained in Volume (1). Abstracts of the papers in this volume have been noted in three articles where the titles are given in English: V.I. Veksler, et al., "High Current Pulsed Electron Accelerators"; L.A. Artsimovich, et al., "High Frequency Plasma Oscillations"; and Engelhardt, "Investigations of the Ring Pinch Problem". The serial numbers of reports 2368 and 2369 are reversed in the Russian edition. Report 2211, by Alexeyev, et al., is numbered 2356 in the English edition.

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AUTHORS: Bonch-Osmolovskaya, N. A., Dzhelepov, B. S., Kraft, O. Ye.

TITLE: Study of Positron Spectra of Neutron-deficient Isotopes 19 19

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 3, pp. 283-287

TEXT: The article under review was read at the Tenth All-Union Conference on Nuclear Spectroscopy (Moscow, January 19 - 27, 1960). The authors studied the positron spectra of some neutron-deficient isotopes obtained by bombarding a tantalum target with 680-Mev protons. The authors used a β-spectrometer with triple beam focusing. Results are given according to elements. Lutetium: The hardest component recorded had an energy limit of about 2,800 kev. All spectral regions with an energy exceeding 1,500 kev corresponded to one and the same half-life of 85±18 min (Fig. 1). Thus, it may be seen from the Curie curve shown in Fig. 2 that the energy limit of the β^+-spectrum was 2,800±200 kev, corresponding to a half-life of 56±12 min. The above component can, therefore, be ascribed to Lu^{167}

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(55 min). The Curie curve of this isotope is shown in Fig. 3. The problem of the β^+-spectrum with the energy limit of 2,800 kev and T = 85 min has not yet been solved. Such an isotope is unknown. Two explanations are possible: 1) Such an Lu isotope as, e.g., Lu^{168} actually exists. In this case also a γ-radiation would have to exist for this half-life, which has not yet been observed. 2) It is the radiation of the 75-minute Yb isotope (β^+-energy limit 2.95 Mev); the presence of such an impurity is not impossible. Thulium: The authors recorded a β^+-spectrum with an energy limit of 2.1 Mev (7.3 hours - Tu^{166}) and one with 137 min (Tu^{163}). As shown in Fig. 4, the spectrum consists of two components with the energy limits 1,050±80 and 400±50 kev with an intensity ratio of 1 : 0.7. The Tu^{163} - Er^{163} mass difference was ≈ 2,070 kev. Other authors found 2.1 and 2.24 Mev. Erbium: Intense positron emission with an energy limit of 1,300 kev (~2.5 hours) was found, further one with 115±15 min. This spectrum also consisted of two components with the energy limits 1,900±100 and 2,980±100 kev, and an intensity ratio of 5 : 1. Also the electron-conversion line with 900 kev (2 hours), which was observed for the first time by I. A. Dneprovskiy, was detected. Dysprosium: The

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Study of Positron Spectra of Neutron-deficient Isotopes

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B006/B014

dysprosium spectrum also consisted of two components with the energy limits 2,700±100 and 1,650±100 kev, and an intensity ratio of 3 : 1. Two possibilities concerning the origin of these components are discussed. There are some facts which contradict the existence of a decay series $Dy^{154} \xrightarrow{3hs} Tb^{154} \xrightarrow{18hs} Gd^{154}$, but speak in favor of $Dy^{152} \xrightarrow{3hs} Tb^{152} \xrightarrow{18hs} Gd^{152}$. Besides, the authors also detected a β^+-spectrum with an energy limit of about 900 kev (10 hs - presumably Dy^{155}). A. S. Basina is mentioned. Finally, the authors thank I. A. Yutlandov and V. M. Khalkin for carrying out the chemical work, as well as K. Ya. Gromov and L. K. Peker for their discussions. There are 5 figures and 17 references, 8 of which are Soviet.

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BONCH-OSMOLOVSKAYA, N.A.; DZHELEPOV, B.S.; KRAFT, O.Ye.;
CHZHOU YUYE-VA [Chou Yüeh-wa]

Positron spectra of the neutron-deficient isotopes of terbium and neodymium. Izv. AN SSSR. Ser. fiz. 25 no.7:826-831 Jl '61. (MIRA 14:7)

(Terbium--Spectra) (Neodymium--Spectra)
(Positrons)

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26.2541

AUTHORS: Bonch-Osmolovskaya, N. A., Gromov, K. Ya., Dzhelepov, B. S., Kraft, O. Ye., Malysheva, T. V., Nikityuk, L. N., Khotin, B. A., Chou Yüch-wa, and Chumin, V. G.

TITLE: The predicted isomer Ir^{186}

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 8, 1962, 975-976

TEXT: Positrons with an intensity decrease of $T_{1/2} \sim 2$ hrs were discovered in a spectrometric investigation of an iridium fraction obtained from a gold target irradiated by 660-Mev protons. The positron spectrum consisted of five components (end-point energies 3400, 2600, 1930, 1300, ~800 kev; relative intensities 1, 20, 44, 12, 22). The conversion electron spectrum of the same Ir fraction had two lines (M 137, N 137). The I(t) of these lines curve could not be attributed to a single halflife. M 137 consists of two components; one with $T_{1/2} = 15 \pm 1$ hrs and one with 1.7 ± 0.2 (Ir^{186}) which is, within the limits of error, equal to the

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Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R00082601

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, O.Ye., kand. fiziko-matematicheskikh nauk; LISTENGARTEN, M.A., kand. fiziko-matematicheskikh nauk

Recent research in nuclear spectroscopy; conference in Tiflis. Vest. AN SSSR 34 no.6:94-97 Je '64 (MIRA 17:8)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

DZHELEPOV, B.S.; KAUFMAN, V.Z.; KRAFT, O.Ye.; NAUMOV, Yu.V.

Measurement of $\beta^+\gamma$-coincidences in $Tu^{166} \xrightarrow{\varepsilon, \beta^+} Er^{166}$ decay. Izv. AN SSSR. Ser. fiz. 29 no.7:1079-1082 Jl '65. (MIRA 18:7)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

L 13834-66 EWT(m)/EWP(j) DIAAP WW/RM

ACC NR: AP6002677 SOURCE CODE: UR/0048/65/029/012/2141/2146

AUTHOR: Kraft, O.Ye.; Naumov, Yu.V.

29
B

ORG: none

19,44,55

TITLE: A beta-gamma coincidence scintillation spectrometer with a low gamma-gamma coincidence background/Transactions of the Fifteenth Annual Conference on Nuclear Spectroscopy and Nuclear Structure held at Minsk 25 January to 2 February 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 12, 1965, 2141-2146

TOPIC TAGS: beta decay, beta spectroscopy, gamma spectroscopy, gamma background, scintillation spectrometer,

ABSTRACT: A beta-gamma coincidence scintillation spectrometer is described in which special means are employed to reduce the gamma-gamma coincidence background. Such means are particularly desirable when investigating complex decay schemes where there are many gamma cascades. In this spectrometer the gamma rays are detected with an NaI crystal and the beta particles with an anthracene crystal or a plastic scintillator. Between the source and the beta detector is mounted a thin (~0.3 mm) film of plastic scintillating material in a highly reflecting housing of ~1 μ aluminum foil. The photomultipliers associated with the beta detector and the film scintillator are connected to a coincidence circuit, and only coincidences are recorded as beta particles. Gamma rays that enter the beta detector cannot produce a flash in the thin film scintillator and thus are not recorded. The energy lost by a beta particle traversing

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

L 13834-66

ACC NR: AP6002677

the film scintillator and its housing was found to be 80-100 keV; this energy loss makes the instrument unsuitable for investigation of soft beta spectra. The behavior of the instrument is discussed in some detail, and it is concluded that in cases favorable to its use the gamma-gamma coincidence background can be reduced by a factor of 10 to 20 without serious reduction in the true beta-gamma coincidence counting rate. The instrument was employed to record the spectrum of gamma rays in coincidence with positrons of the 1500 keV end-point component of the beta spectrum of Eu^{146}. The source was the gadolinium fraction separated chromatographically from a tantalum target bombarded with 600 MeV protons and aged for two or three months. After aging the material consisted almost entirely of Gd^{146} and the Eu^{146} in equilibrium with it. In the gamma ray spectrum there were found two approximately equal peaks corresponding to gamma-ray energies of 635 and 745 keV. It is concluded that the 1500 keV end-point beta decay goes to the 1380 keV level in Sm^{146}. In these measurements the gamma-gamma coincidence background did not exceed 10% of the true beta-gamma coincidence counting rate. When the film scintillator was removed the gamma-gamma coincidence counting rate was approximately equal to the true beta-gamma coincidence rate. It is concluded that the use of the film scintillator in coincidence with the beta detector reduced the gamma-gamma coincidence background by a factor between 10 and 20. Orig. art. has: 7 formulas and 6 figures.

SUB CODE: 18 SUBM DATE: none ORIG. REF: 001 OTH REF: 001

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

DZHELEPOV, B.S.; KRAFT, O.Ye.; NAUMOV, Yu.V.

Magnetic $\beta\gamma$-spectrometer of coincidences. Izv. AN SSSR. Ser. fiz. 29 no.12:2163-2167 D '65. (MIRA 19:1)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

L 25743-66 EWT(m) DIAAP JD/JG

ACC NR: AP6016389 SOURCE CODE: UR/0048/65/029/007/1079/1082

AUTHOR: Dzhelepov, B. S.; Kaufman, V. Z.; Kraft, O. Ye.; Naumov, Yu. V.

ORG: none

TITLE: Measurement of beta sup plus gamma-coincidences during the decay of $Tu^{166} \xrightarrow{\varepsilon,\beta^+} Er^{166}$

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no.7, 1965, 1079-1082

TOPIC TAGS: radioactive decay, spectrometer, positron, gamma radiation, ytterbium, tantalum, proton, beta spectrum, thulium, erbium, coincidence counting

ABSTRACT: The article is a description of an experiment in which a $\beta\gamma$-spectrometer was used to measure the coincidences of positrons of the hard component of the β^+-spectrum of Tu^{166} with γ-radiation. The source of Tu^{166} was Yb^{166} contained in an ytterbium fraction. The latter was emitted from a tantalum target irradiated with 660 Mev protons. An analysis of the results is carried out to determine the decay and coincidences at various quantum levels. The authors thank Ye. P. Grigor'yev and V. M. Mikhaylov for valuable discussions, and also Zh. Zhelev, A. V. Kudryavtseva, and G. A. Mironov for assistance in receipt of the sources. Orig. art. has: 3 figures and 3 formulas. [JPRS]

SUB CODE: 20 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 001

Card 1/1 BK

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

L 20057-66 EWT(m) DIAAP

ACC NR: AP6017116 SOURCE CODE: UR/0048/65/029/012/2163/2167

AUTHOR: Dzhelepov, B. S.; Kraft, O. Ye.; Naumov, Yu. V.

ORG: none

TITLE: Magnetic coincidence beta gamma spectrometer [19] This paper was presented at the 15th Annual Conference on Nuclear Spectroscopy and the Structure of the Atomic Nucleus, held in Minsk from 25 January to 2 February 1965.]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 12, 1965, 2163-2167

TOPIC TAGS: spectrometer, coincidence counting, beta spectrum, electronic circuit, gamma ray, electron beam, positron

ABSTRACT: To overcome some of the difficulties involved in using ordinary spectrometers for the study of gamma-ray coincidence with low intensity hard components of beta spectra, a special magnetic $\beta\gamma$-spectrometer was designed and built at the Leningrad University. The schematic diagram of the instrument is shown in the enclosure. An 8-bladed fan-shaped diaphragm is used to separate the electron and positron beams. The electronic circuit, the operation of the instrument, and its capabilities are described, as are a number of experiments conducted. Results are plotted in curves and analyzed. The authors thank Yu. G. Zhukovskiy for participating in the early design of the instrument and to V. Z. Kaufman, student at the Leningrad State University, for assisting in its construction.

Card 1/2

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

L 26657-66

ACC NR: AP6017116

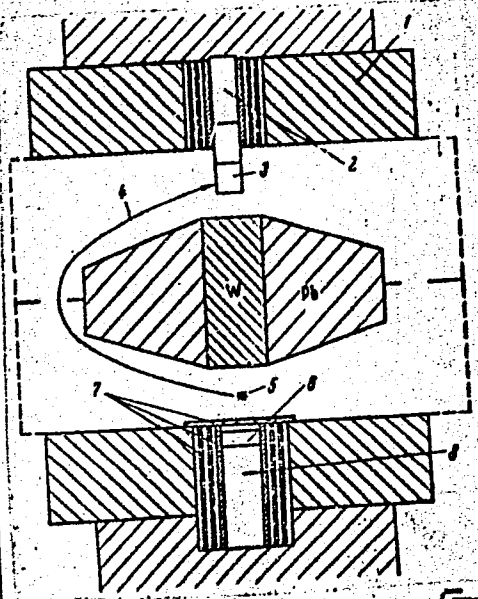


Diagram of the spectrometer: 1) magnet poles, 2) FEU-31 photomultiplier, 3) β crystal, (stilbene) 4) typical electron trajectory, 5) source, 6) γ-crystal (NaI) 7) magnetic shielding for photomultiplier, 8) FEU-35 photomultiplier, dashed lines-vacuum chamber

Orig. art. has: 7 figures. [JPRS]

SUB CODE: 20 / SUBM DATE: none / ORIG REF: 003

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

L 31403-66 EWT(m) I

ACC NR: AP6022577 SOURCE CODE: UR/0048/66/030/003/0554/0559

AUTHOR: Dzhelepov, B. S.; Zaytseva, N. G.; Kraft, O. Ye.; Naumov, Yu. V.; Sigalov, V. M.

ORG: none

TITLE: Spin of sup 71 Lu sup 170 sub 99 [This paper was presented at the 16th Annual Conference on Nuclear Spectroscopy and Nuclear Structure held in Moscow 26 Jan-3 Feb 1966]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 3, 1966, 554-559

TOPIC TAGS: nuclear physics conference, nuclear spin, lutetium, beta decay, proton bombardment

ABSTRACT: The beta$^+$ gamma coincidence method is used to determine the spin of Lu^{170} which has a beta$^+$ decay to the lower rotational band of Yb^{170}. The Lu^{170} sample was obtained from Hf^{170}, with the usual bombardment of a tantalum target with 660 mev protons. The coincidences of ~1660 kev positrons and gamma radiation was studied in the range of 10 to ~250 kev. Coincidences were not observed at energies of 193 and 84 kev, nor were beta$^+$ transitions from the Lu^{170} ground state to the 2^+ and 4^+ levels of Yb^{170}. It is shown that the ground state spin of Lu^{170} is zero - a conclusion that is supported by theoretical arguments. Finally, the purity of the isotopic spin in the ground state of Lu^{170} is determined. The coefficient of impurity isospin (5×10^{-3}) determined theoretically is 20 times greater than the experimental value, which fact needs theoretical explanation. The authors thank L. A. Sliv, and Yu. I. Kharitonov for valuable discussions.

Orig. art. has: 2 figures and 7 formulas. [JPRS]

Card 1/1 SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 009/ OTH REF: 008

0915 0591

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

L 09234-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JG
ACC NR: AP7002795 SOURCE CODE: UR/0048/66/030/008/1286/1291

AUTHOR: Dzhelepov, B. S.; Kraft, O. Ye.; Naumov, Yu. V.

ORG: none

TITLE: Beta + gamma coincidences during the decay of Tb sup 152 yields Gd sup 152

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 8, 1966, 1286-1291

TOPIC TAGS: gamma spectrometer, gamma radiation, position

ABSTRACT: These coincidences were measured with the object of procuring more information on the spin of the Tb^{152} nucleus, which has not previously been experimentally determined. A magnetic $\beta\gamma$-coincidence spectrometer was used: the magnetic spectrometer isolated positrons within a specified energy range and the γ-spectrometer recorded the γ-radiation coinciding with these positrons. The measurements pertained to the spectrum of γ-rays coinciding with positrons of the following energies: ~2500, ~2000, ~1500, and ~1200 kev. Findings: With decrease in positron energies, coincidences with γ272 quanta are observed. The fundamental state of Tb^{152} cannot have the characteristic $I^{\pi} \geq 3^{+}$. The most probable values of the spin and parity of the fundamental state of Tb^{152} must be regarded as 1^{-}. "In conclusion, the authors wish to express their deep appreciation to L. V. Moskvin and Yu. V. Norseyev for isolating terbium from dysprosium, and they thank Zh. T. Zhelev and K. Ya. Gromov for cooperation in procuring the sources." Orig. art. has: 4 figures and 1 table. [JPRS: 39,040]

Card 1/1 SUB CODE: 20 / SUBM DATE: none / ORIG REF: 010 / OTH REF: 004

0925 1682

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

L 64817-65 EWP(c)/EWP(v)/EWP(k)/EWP(h)/EWP(l)/ETC(m) WW

ACCESSION NR: AP5023230 RU/0003/64/015/010/0630/0634

AUTHOR: Kraft, V.; Grigoriu, H.

TITLE: Some aspects of cost price analysis in the chemical enterprises

SOURCE: Revista de chimie, v. 15, no. 10, 1964, 630-634

TOPIC TAGS: chemical industry, economics, cost estimate

ABSTRACT: A study of cost analysis in the chemical industry, discussing the structure of cost price indices and means of reducing costs. The authors conclude that a unified system of complex cost price indicators would be most useful to stimulate plants producing similar types of goods towards achieving the lowest possible costs. Orig. art. has: 38 formulas, 2 tables, 1 figure.

ASSOCIATION: none

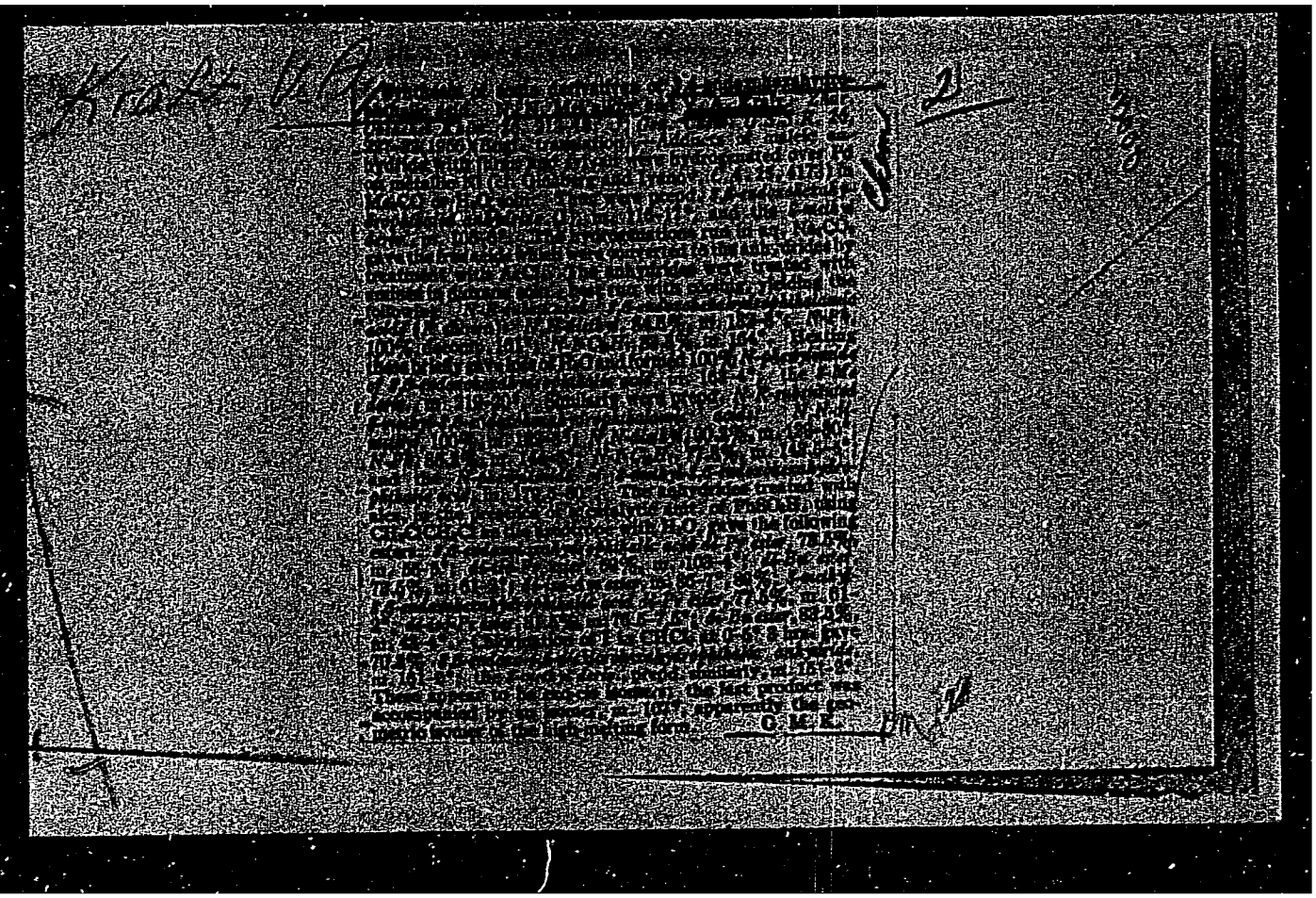
SUBMITTED: 00 ENCL: 00 SUB CODE: GC, 00

NR REF SOV: 000 OTHER: 000 JPRS

Card 1/1

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2



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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

5 (3)

AUTHORS: Mel'nikov, N. N., Kraft, V. A. SOV/79-29-3-46/61

TITLE: On Some Derivatives of 4,5-Dichloro-3,6-endoxohexahydro Phthalic Acid (O nekotorykh proizvodnykh 4,5-dikhlor-3,6-endoksogeksagidroftalevoy kisloty)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 968-971 (USSR)

ABSTRACT: The synthesis of the anhydrides of 4,5-dichloro-3,6-endoxohexahydro phthalic- and 3-methyl-4,5-dichloro-3,6-endoxohexahydro phthalic acid, which the authors carried out by chlorination of the anhydride of 3,6-endoxo- and 3-methyl-3,6-endoxo--1,2,3,6-tetrahydro phthalic acid, had to be investigated by them more thoroughly, all the more as there is no mention in publications concerning the properties of 4,5-dichloro-3,6--endoxohexahydro phthalic acids and their derivatives, except the corresponding dibromo derivatives (Refs 2-9,10). In the work under review the authors investigated the synthesis of various derivatives of 4,5-dichloro-3,6-endoxohexahydro phthalic acid more closely. By the esterification of 3-methyl-4,5-dichloro-3,6-endoxohexahydro phthalic acid and of 4,5-dichloro-3,6-endoxohexahydro phthalic acid with various alcohols in the presence of benzene sulfo acid, the esters,

Card 1/3

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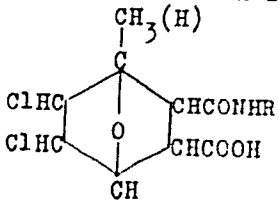
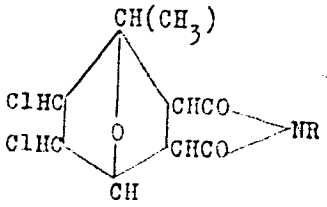
"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

On Some Derivatives of 4,5-Dichloro-3,6-endoxohexahydro Phthalic Acid SOV/79-29-3-46/61

hitherto unknown, of these acids were synthesized and the corresponding amino acids (I) and (II) (Table) were synthesized by the reaction of anhydrides with amines. Two isomers were separated for the 3-methyl-4,5-dichloro-3,6-endoxohexahydro phthalic acid. Esters and amides were obtained from both isomers.



(I)



(II)

There are 1 table and 11 references, 2 of which are Soviet.

Card 2/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

On Some Derivatives of 4,5-Dichloro-3,6-endoxohexa-hydro Phthalic Acid SOV/79-29-3-46/61

ASSOCIATION: Institut fiziologii rasteniy Akademii nauk SSSR (Institute of Plant Physiology of the Academy of Sciences, USSR)

SUBMITTED: February 18, 1958

Card 3/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

L 4929-66 EWT(1)/EWA(1)/EWT(m)/EWA(b)-2 RO/GS/RM

ACC NR: AT5026041 SOURCE CODE: UR/0000/65/000/000/0255/0257

AUTHOR: Kraft, V. A.; Mel'nikov, N. N.

ORG: Institute of Plant Physiology imeni K. A. Timiryazev, Academy of Sciences SSSR (Institut fiziologii rasteniy, Akademii nauk SSSR)

TITLE: Herbicides and plant growth regulators. Part 40: Synthesis of certain esters of 3,6-endoxohexahydrophthalic and 4,5-dichloro-3,6-endoxohexahydrophthalic acid

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Biologicheski aktivnyye soyedineniya (Biologically active compounds). Moscow, Izd-vo Nauka, 1965, 255-257

TOPIC TAGS: phthalic acid, phthalic anhydride, ethanol

ABSTRACT: Acid esters of 3,6-endoxohexahydrophthalic acid and 4,5-dichloro-3,6-endoxohexahydrophthalic acid and complete esters of 3,6-endoxohexahydrophthalic acid were prepared. The acid esters were obtained by heating on a water bath a mixture of equimolar amounts of the acid anhydride and an aryloxy ethanol: 2,4-dichlorophenoxyethanol was reacted with 3,6-endoxohexahydrophthalic anhydride; 2,4-dichlorophenoxyethanol and 2,4,5-trichlorophenoxyethanol were reacted with 4,5-dichloro-3,6-endoxohexahydrophthalic anhydride. All the compounds thus synthesized had not been previously reported in the literature. Their formulas, yields, melting points, and molecular weights are tabulated. Orig. art. has: 1 table.

SUB CODE: OC, GC, CB / SUBM DATE: 02Dec63 / ORIG REF: 004

Card 1/1

09011373

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, V.; GRIGORIU, H.

Some aspects of cost price analysis in chemical enterprises.
Rev chimie Min petr 15 no.10:630-634 O '64.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, V. A.

"The Barrier-trap Method of Determining the Moves of Water Voles."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Akmolinsk Oblast' San.-Epid. Station

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, V.A.

Effect of hydrometeorological factors on the incidence of malaria in Akmolinsk Province. Med.paraz. i paraz.bolezn. 23 no.1:75-79 Ja-F '59. (MIRA 12:3)

1. Iz Akmolinskoy oblastnoy sanitarno-epidemilogicheskoy stantsii (glavny vrach V.F. Kovalev).
(MALARIA, epidemiol.
in Russia, climate factors (Rus))
(CLIMATE,
eff. on Malaria morbidity in Russia (Rus))

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, V.A.

Changes in water rat populations due to the mowing of macrohydrophilic vegetation. Zool.zhur. 39 no.1:136-141 Ja '60. (MIRA 13:5)

1. Akmolinsk Regional Sanitary Epidemiological Station.
(Field mice) (Rodent control)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, V.A.

Barrier-trap method of recording migrations of water voles. Zool. zhur. 39 no.5:789-791 My '60. (MIRA 13:10)

1. Akmolinsk Regional Sanitary-Epidemiological Station.
(Kazakhstan--Field mice) (Wildlife census)
(Animal migration)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, V.A.

Migrations of water voles Arvicola terrestris L. and their role in the formation of epizooties of Tualremia. Zool. zhur. 40 no.12:1883-1891 D '61. (MIRA 15:3)

1. Sanitary Epidemiological Station of Tselinograd Territory.
(Tularemia) (Field mice)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, V.A.

Epidemiology of tularemia in the former Akmolinsk Province. Zhur. mikrobiol., epid.i immun. 33 no.4:53-57 Ap '62. (MIRA 15:10)

1. Iz Krayevoy sanitarno-epidemiologicheskoy stantsii TSelinnogo kraya.

(AKMOLINSK PROVINCE--TULAREMIA)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, V.A.

Determination of the individual activity of Ixodes persulcatus Sch. ticks by marking. Med. paraz. i paraz. bol. 32 no.6: 736-738 N-D '63 (MIRA 18:1)

1. Iz Akmolinskoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach V.F. Kovalev).

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, V.A.

Effect of hydroclimatic factors on the development of tularemia epizootics and epidemics in TSelinograd Province. Zhur. mikrobiol. epid. i immun. 40 no.5:41-48 My '63. (MIRA 17:6)

1. Iz TSelinogradskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFT, V.A.

Reproduction of wa · voles (Arvicola terrestris Pall.) and factors regulating their abundance in the floodplain of the Ishim River. Zool. zhur. 44 no.1:117-122 '65. (MIRA 18:4)

1. Belinogradskaya oblastnaya sanitarno-epidemiologicheskaya stantsiya.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

ACC NR: AP6025809 (A,N) SOURCE CODE: UR/0326/66/013/004/0595/0601

AUTHOR: Kraft, V. A.; Doman, N. G.; Vasileva, Z. A.

ORG: Institute of Plant Physiology im. K. A. Timiryazev, Academy of Sciences, SSSR, Moscow (Institut fiziologii rasteniy Akademii nauk SSSR); Institute of Biochemistry im. A. N. Bakh, Academy of Sciences, SSSR, Moscow (Institut biokhimii)

TITLE: Effect of defoliants on some products of photosynthetic assimilation of carbon dioxide

SOURCE: Fiziologiya rasteniy, v. 13, no. 4, 1966, 595-601

TOPIC TAGS: defoliant, defoliant effect, photosynthesis, plant physiology, ~~butiphos~~ defoliant agent, plant morphology, plant sensibility

ABSTRACT: The radioactive tracer method was used in studying the fixation of CO_2 in plant tissue treated with defoliants. Fig. 1 shows the effects of defoliants on the intensity of $C^{14}O_2$ fixation by cotton and bean leaves. Treatment with Butiphos and BEXT caused decreased photosynthetic fixation of labeled CO_2 in bean and cotton plants. The amino acid fraction increased in cotton plants, while labeled alanine and aspartic acid increased in both species. Both defoliants increase the amount of organic and phosphoric acids. CO_2 fixed in polysaccharides is decreased while pretreatment of the plants by

Card 1/2 UDC: 581.132+632.934+633.51+635.652

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ACC NR: AP6025809

keeping half in darkness and half in light for several hours before applying defoliant had no effect on the final composition of photosynthetic products in the leaves of both groups of plants.

[WA-50; CBE No. 11]

SUB CODE: 06/ SUBM DATE: 19Jun 65/ ORIG REF: 018/ OTH REF: 006/

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

MEL'NIKOV, N.N.; KRAFT, V.A.

Herbicides and plant regulators. Part 35: Synthesis of some triphenylphenoxyalkylphosphonium salts. Zhur.ob.khim. 30 no.6:1918-1921 Je '60. (MIRA 13:6)

1. Institut fiziologii rastenii Akademii nauk SSSR.
(Phosphonium compounds) (Herbicides)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

RAKITIN, Yu.V.; BOKAREV, K.S.; KRAFT, V.A.; RAKITINA, Z.G.; GEYDEN, T.M.
GURVICH, S.M.

New defoliants and desiccants for cotton. Fiziol. rast. 8 no.4:506-511 '61. (MIRA 14:11)

1. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.
(Cotton)
(Defoliation)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

BOKAREV, K.S.; KRAFT, V.A.; KAPELYUSHNIKOVA, L.M.

Synthesis of bis-alkyl xanthogen trisulfides. Izv. AN SSSR Ser. khim. no.12:2175-2182 D '64 (MIRA 18:1)

1. Institut fiziologii rasteniy imeni K.A. Timiryazeva AN SSSR.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

L 36991-65 EEO-2/EWT(1)/FSF(b)/EEC(t)/EEO-2 Pn-4/Pn-4/Pac-4/Pi-4/Pi-4/Pk-4/

ACCESSION NR: AP5005981 P1-4 WR S/0108/65/020/002/0026/0032

AUTHOR: Kraft, V. V.; Terpugov, A. F.

52

B

TITLE: Optimal shapes of radar pulses

SOURCE: Radiotekhnika, v. 20, no. 2, 1965, 26-32

TOPIC TAGS: radar pulse, radar pulse shape

ABSTRACT: Radar-pulse shapes are found which ensure minimum error in finding target coordinates when the radar receiver is optimal. A receiver that finds the target coordinates by the method of maximum likelihood is regarded as asymptotically optimal; a pulse shape that ensures σ^2_{min} is regarded as optimal. The pulse shape ensuring maximum accuracy in determining range is described by:

$$J_1 = -\int_0^T\int_0^T K^*\left(\frac{t_1-t_2}{T-\theta}\right) s(t_1)\, s(t_2)\, dt_1\, dt_2$$

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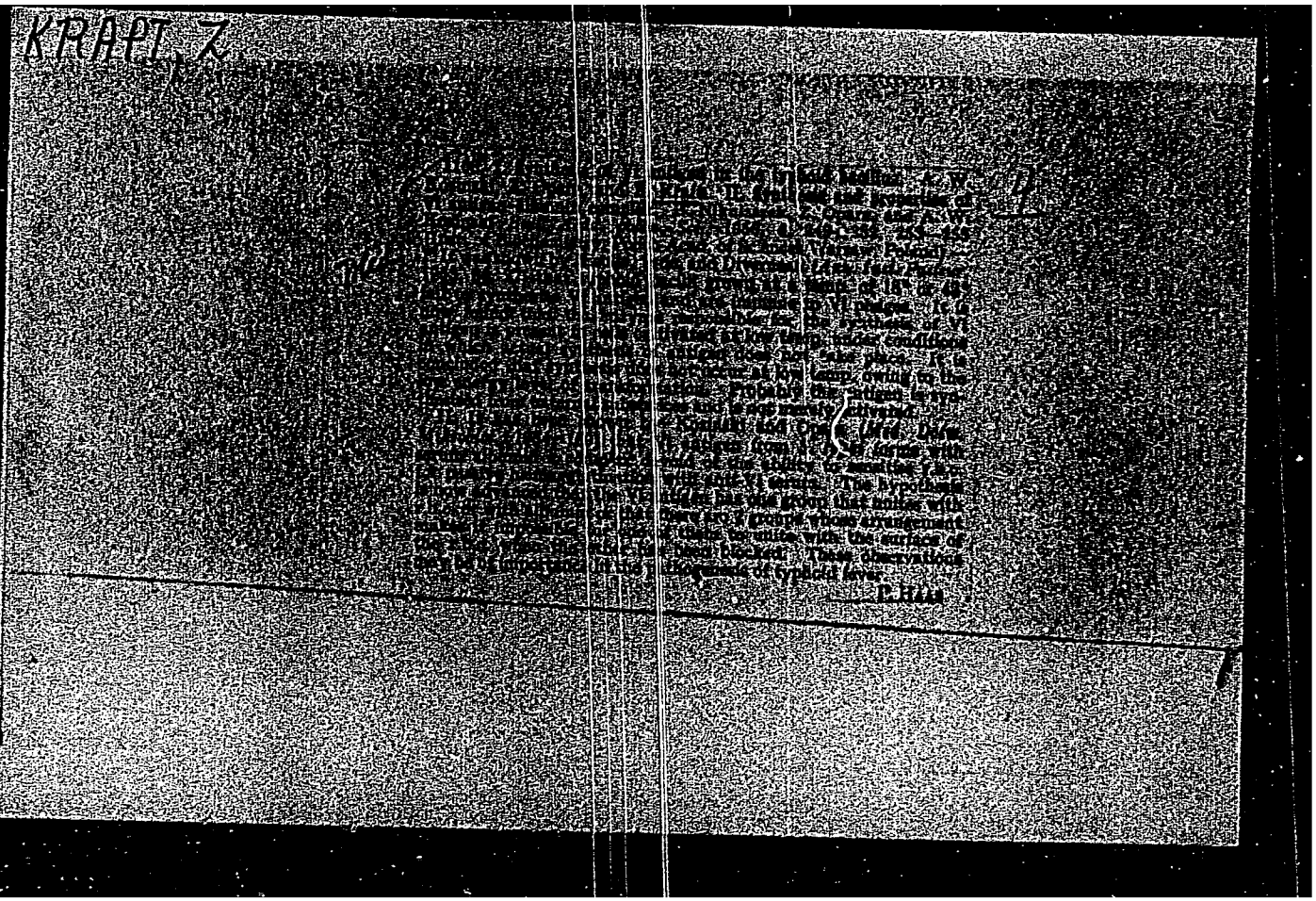

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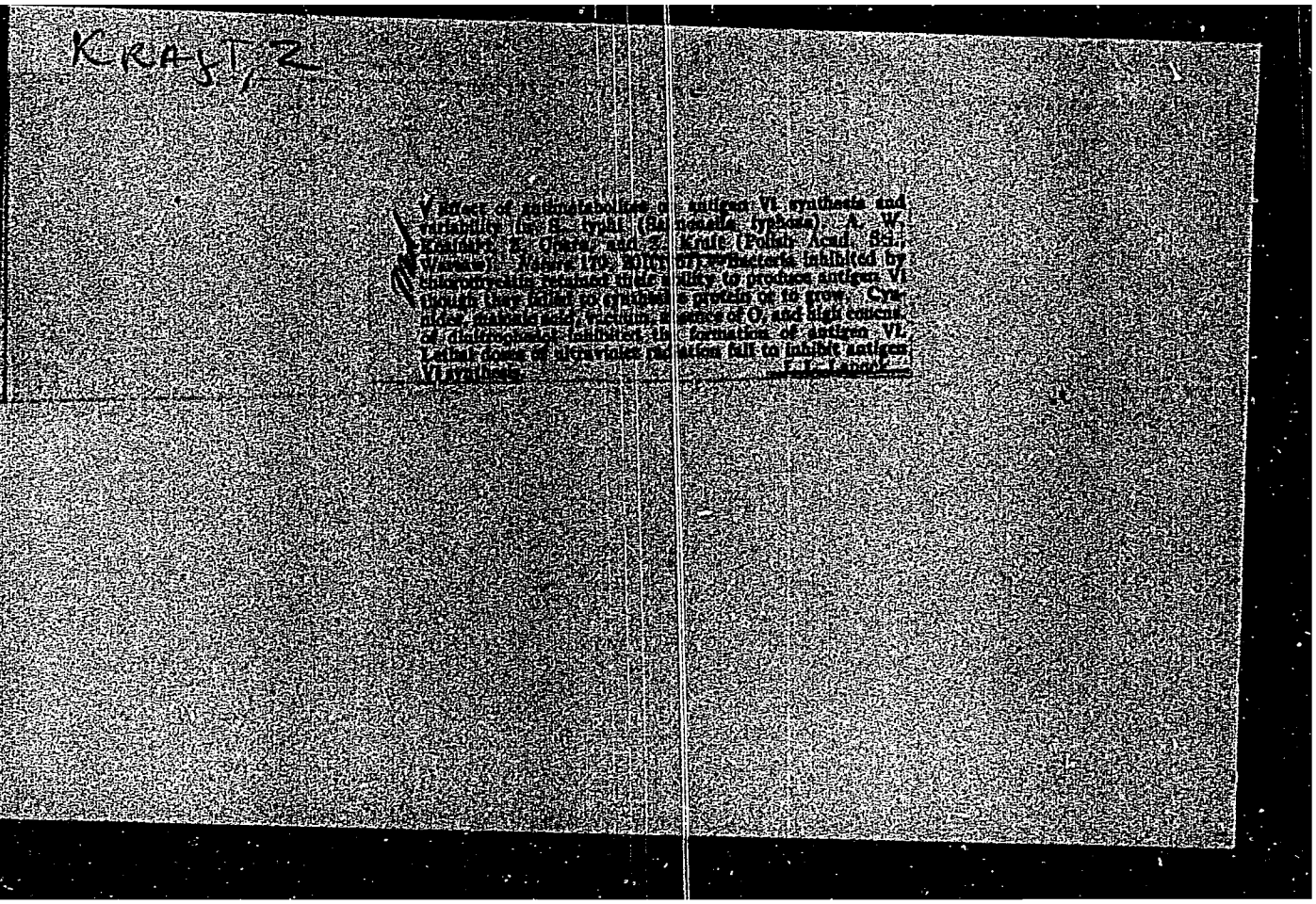

KRAJT, Z

V Effect of antimetabolites on antigen VI synthesis and variability in S. typhi (Salmonella typhosa). A. W. Kosinski, Z. Opara, and Z. Kruit (Polish Acad. Sci., Warsaw). Nature 179, 201(1957). Bacteria inhibited by chloromycetin retained their ability to produce antigen VI though they failed to synthesize protein or to grow. Cyanides, malonic acid, vacuum, absence of O, and high concns. of dinitrophenol inhibited the formation of antigen VI. Lethal doses of ultraviolet radiation fail to inhibit antigen VI synthesis. J. L. Lapock

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFTI, Georgi, inzh.

Methods of projecting a system for irrigation farming.
Khidrotekh i melior 7 no.6:188-190 '62.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFTMAKHER, A.YA.

Category : USSR/General Problems - Problems of Teaching A-5

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 5541

Author : Kraftmakher, A.Ya.
Title : Determination of the Velocity of a Bullet with the Aid of Inductive Transducers and a Cathode Ray Oscillograph.

Orig Pub : Uch. za p, Yelabukhsk. ped. in-ta, 1956, 1, 73-84.

Abstract : Description of four laboratory projects.

Card : 1/1

KRAFTMAKHER YA A.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-

AUTHOR: Kraftmakher, Ya.A.

115-5-33/44

TITLE: Viscosimeter with Induction Indicators (Viskozimetr s induktivnymi datchikami)

PERIODICAL: "Izmeritel'naya Tekhnika", No 5, Sep-Oct 1957, pp 78-79 (USSR)

ABSTRACT: The article presents a suggestion for viscosimeter design with a falling solid ball, used for viscosity measurements in non-transparent fluids or in fluids under high pressure, in a wide temperature range, where the presently practiced Stoke's method (with falling ball in transparent fluids) is impracticable. The proposed viscosimeter comprises two series-connected inductive indicators and two condensers, which form the oscillating circuit of a tube generator. When the metal ball passes the inductive indicators, electric impulses are generated in a load resistance which is inserted in the anode circuit of the oscillator. The anode current is measured by a milliampermeter. For the case of high speed of the ball, it is suggested to utilize an electronic oscillograph (as is done in the case illustrated by a circuit diagram in the article). It is stated that in this case the described viscosimeter is used, in connection with the oscillograph "30-7", the impulse amplitude would be not less than 10 volt.

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...cosimeter with Induction Indicators

115-5-33/22

The suggested viscosimeter design is claimed to have considerable advantages as compared with viscosimeters utilizing the induction method or the pulsation method. The inductive indicators under consideration are recommended for work with conventional viscosimeters.
The article contains 1 circuit diagram and 3 references.

AVAILABLE: Library of Congress

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APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

AUTHORS: Kraftmakher, Ya. A., Lyulichev, A. N., Shakhtin, D. M. SOV/32-24-7-51/65

TITLE: The Investigation of the Operation of Laboratory Mixers by Means of Magnetic Indicators (Izucheniye raboty laboratornykh smesiteley pri pomoshchi magnitnykh indikatorov)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 7, pp. 893 - 895 (USSR)

ABSTRACT: The apparatus constructed is based on the measurement of the magnetic conductivity of the samples in the low-frequency magnetic field. The instrument measuring the magnetic susceptibility was constructed by Ya.A.Kraftmakher. The measuring unit is an H-shaped armature on which three induction coils are arranged. The sample to be investigated is attached in such a way to the measuring unit that the magnetic flux passes through it; thus the inductive voltage in one of the coils is changed and the voltage of the measuring unit serves as a standard for the magnetic susceptibility of the sample. From the schematic representation of the apparatus given may be seen that a low-frequency generator, the measuring unit, a low- frequency amplifier, a detector, a lamp voltmeter as well as a visual in-

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

dicator and a supply pack are assembled. The instrument has six measuring ranges of from 10^{-4} to 10^{-1} units of magnetic susceptibility in the CGSM system: the degree of mixing is determined by the measuring of the concentration of the magnetic powder in the samples taken from different places. The concentration of the magnetic powder is measured according to the magnetic susceptibility of the specimens pressed from the samples to be investigated. Granular sizes of quartzite of up to 0,5mm were used in the experiments; iron powder of 2,5% $Ca(OH)_2$, 0,5% sulfite alcohol vinasse, 8% water and 1,5% iron powder served as indicator. The results obtained were obtained from the mean value of the magnetic susceptibility and an equation; a diagram is given. There are 3 figures.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut ogneuporov (All-Union Scientific Research Institute For Refractories)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFTMAKHER, Ya.A.

Two laboratory operations in electronics. Izv. vys. ucheb. zav.; fiz. no.4:95-97 '59. (MIRA 13:3)

1. Yelabuzhskiy gosudarstvennyy universitet.
(Electrons)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFTMAKHER, Ya.A. (Moskva); STRELKOV, P.G. (Moskva)

Automatic regulation of adiabatic processes in calorimetric measurements. PMTF no.3:194-197 S-O'60. (MIRA 14:7)
(Calorimetry)
(Automatic control)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFTMAKHER, Ya.A.

Laboratory work to determine electron charge. Izv.vys.ucheb.zav.; fiz. no.2:138-142 '61. (MIRA 14:7)

1. Moskovskiy pedagogicheskiy institut imeni V.I.Lenina.
(Electrons)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

ASTROV, D.N.; KRAFTMAKHER, Ya.A.

Simple circuit for operating with capacitance pickups. Prib. i tekh. eksp. 6 no.2:180 Mr-Ap '61. (MIRA 14:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy.
(Electronic circuits)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

S/139/62/000/001/031/032
E032/E114

AUTHOR: Kraftmakher, Ya.A.

TITLE: On the determination of the electrodynamic constant

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no.1, 1962, 175-176

TEXT: It is pointed out that in a teaching laboratory the electrodynamic constant is usually determined by periodically charging and discharging a capacitor through a tangent galvanometer. [Abstractor's note: The electrodynamic constant referred to here is the ratio of the electromagnetic to the electrostatic units of charge.] When the sensitivity of the galvanometer is small, a large current must be passed through it (several hundred milliamps) and the charge-discharge key does not operate satisfactorily. In order to obviate this difficulty the author puts forward the method illustrated by Fig.1. This circuit includes an additional micrometer and a key K_2. When the key is in the left-hand position the micrometer measures the discharge current which is proportional to C and the voltage

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

across the condenser. When the key is in the right-hand side position the micrometer records a known fraction of the current passing through the tangent galvanometer. The resistor R is chosen so that the current passing through the micrometer is the same for both positions of the key K_2. The resistors R_1 and R_2 are chosen so as to produce a suitable deflection in the tangent galvanometer. The electrodynamic constant is then equal to

$$\frac{2\pi n\ CUN}{r\ H_o\ \tan\varphi}\ \frac{R_1 + R_2 + R_o}{R_1}$$

where: C is the capacitance; U is the voltage of the battery charging the capacitor; N is the frequency of K_1; H_o is the horizontal component of the earth's magnetic field; n is the number of turns on the tangent galvanometer; R is the resistance of the coil of the tangent galvanometer; φ is the deflection of the galvanometer with K_2 in the right-hand position; and R_o is the internal resistance of the micrometer.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

On the determination of the ... S/139/62/000/001/031/032
E032/E114

The key K1 is in the form of a polarised relay PM-4 (RP-4) run off the AC mains. With this method the electrodynamic constant can be determined to within 1%.
There is 1 figure.

ASSOCIATION: Yelabuzhskiy pedinstitut
(Elabuga Pedagogical Institute)

SUBMITTED: December 23, 1960

Card 3/4

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFTMAKHER, Ya.A.

Determining the velocity of light in physics classwork.
Izv. vys. ucheb. zav.; fiz. no.5:65-70 '62. (MIRA 15:12)

1. Yelabuzhskiy pedagogicheskiy institut.
(Light—Speed)
(Physics—Study and teaching)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFTMAKHER, Ya.A. (Novosibirsk)

The modulation method for heat capacity measurements. PMTF no.5:176-180 S-O '62. (MIRA 16:1)
(Heat capacity--Measurement)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

39986

S/181/62/004/008/035/041
B108/B102

AUTHORS: Kraftmakher, Ya. A., and Strelkov, P. G.

TITLE: Formation energy and concentration of vacancies in tungsten

PERIODICAL: Fizika tverdogo tela, v. 4, no. 8, 1962, 2271 - 2274

TEXT: The formation energy and concentration of vacancies in tungsten was determined from the specific heat whose temperature dependence was measured from 2000 to 3600°K. Temperature of the specimens was modulated on a frequency of some 120 cps by a current (constant + variable components) passing through the specimens. The rise in specific heat at high temperatures was measured as $\Delta C_p = (U^2/RT^2)A \exp(-U/RT)$, where U is the formation energy of the vacancies, $A \exp(-U/RT)$ is the vacancy concentration at temperature T. Measurements and evaluation of this formula yielded for tungsten a vacancy formation energy of 72.5 kcal/g-atom. The vacancy concentration is $c = 670 \exp(-72500/RT)$, which at 3600°K is 2.7%. There are 2 figures.

Card 1/2

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

Formation energy and ... S/181/62/004/008/035/041
B108/B102

ASSOCIATION: Institut teplofiziki Sibirskogo otdeleniya AN SSSR Novosibirsk (Institute of Heat Physics of the Siberian Department AS USSR, Novosibirsk)

SUBMITTED: April 26, 1962

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFTMAKHER, YA. A.
AID Nr. 977-8 27 May

VACANCY FORMATION IN NIOBIUM (USSR)

Kraftmakher, Ya. A. Fizika tverdogo tela, v. 5, no. 3, Mar 1963, 950-951.
S/181/63/005/003/039/046

To determine the energy of vacancy formation and the vacancy concentration in Nb, the Institute of Thermophysics, Siberian Department of the Academy of Sciences USSR, has measured the specific heat of Nb in the 1300-2700°K range. Vacuum-degassed Nb specimens, 0.11 and 0.13 mm in diameter and 40-70 mm long, were "trained" at 2000°K at a residual pressure of 2×10^{-6} mm Hg. Results of the measurements show the energy of vacancy formation in Nb to be 47 kcal/g-atom. The vacancy concentration in Nb at the melting temperature reaches 1.2%, while the additional specific heat associated with vacancy formation at the melting temperature is 0.57 kcal/g-atom. [MS]

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000826010011-2

KRAFTMAKHER, YA. A. (Novosibirsk)

"Measuring the specific heat of tungsten at temperatures up to 3000C, molybdenum, up to 2200C, and niobium, up to 2400C."

Report presented at the Seminar on the Problems of research on thermophysical properties of substances at high temperatures, Novosibirsk, 9-10 April 1963.

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L 17041-63 EPR/EWA(h)/EWP(r)/EPF(c)/EWT(1)/ S/207/63/000/002/020/025
EPF(n)-2/EWP(q)/EWT(m)/BDS/ES(s)-2 AFFTC/ASD/SSD Ps-4/Pr-4/Pi-4/Pt-4/Pu-4
WW/JW/JD/JG

AUTHOR: Kraftmakher, Ya. A. (Novosibirsk)

TITLE: Heat capacity of tantalum in the 1200-2900°K temperature interval

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1963, 158-160

TEXT: Using the modulation method (Ref. 1: Ya. A. Kraftmakher, PMTF, 1962, No. 5) the author determined the heat capacity of Ta in the 1200-2900°K temperature interval. Between 1200 and 2000°K the heat capacity follows the equation

$$C_p = 5.82 + 0.00068\,T \text{ cal/g-at. degree} \qquad (1)$$

at higher temperatures there is an additional increase in heat capacity due to the creation of vacancies, and it agrees with the equation

$$\Delta C_p = \frac{u^2}{RT^2} A \exp\frac{-u}{RT} \qquad (2)$$

Card 1/2

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